American Farmer,

AND SPIRIT OF THE AGRICULTURAL JOURNALS OF THE DAY

"O Fortunatos nimium sua si bona norint
"Agricolas." . . . . *Virg.*

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Agricultural Chemistry.

The following interesting Essay, is from the pen of one of the most successful *farmers* in New England—a gentleman who besides having great experience in all that concerns *practical* agriculture, combines an extent of scientific knowledge rarely to be met with in any but professional men, and but *rarely* in them—and who, superadds an enthusiasm as praiseworthy as it is beneficial to the great class with whom his interests are identified; as it impels him to reflect the lights of his abundant knowledge over an area as extensive as the Republic of letters itself, for the emanations from his ripe mind are universally copied.

From the Boston Cultivator.

Messrs. Editors:—Not long since, I heard a person who possessed some knowledge of agricultural chemistry, telling some farmers and others, that a large part of the solid substance of trees, and other vegetable productions, was derived from the air, or rather, that part of the atmosphere called carbonic acid, and that this acid, or gas, was precisely like that which issues from a barrel of fermenting beer or cider. After the man left them, they began to express their doubts about the truth of his theory. Says one, 'tis all nonsense, the visionary dreamings of a book farmer. Yes, says another, if his doctrine is true, what's the use of manure, muck, and composts that he talks so much about. A third one observes, when he can make me believe that the moon is made of green cheese, I shall believe his story about trees being made out of the steam that flies out of the bung-hole of a barrel, when the cider is *working*.

Now, Messrs. Editors, I cannot think many of your readers are so ignorant, but still some of them may not have taken pains to investigate the subject as they ought, either from a belief that it is not necessary for a "common farmer," or that chemistry is too intricate a study for the tiller of the soil to trouble his head about.

To while away an evening, and perhaps, to throw a little light upon the subject, I forward you the following, with the hope it may in some measure stimulate farmers to a more familiar study of agricultural chemistry; of its importance there can no longer be any doubt; it is a matter about which there "are no two ways."

The atmosphere we breathe and in which plants grow and live, is compounded principally of a mixture of oxygen and nitrogen gases, in the proportion very nearly of 21 of the former to 79 of the latter. It also contains as a constituent necessary to the very existence of vegetable life, a small per centage of carbonic acid, on an average of about 1-2599 part. At first view it would seem impossible that this apparently small amount of carbonic acid could supply about one half the solid substance to all plants that annually grow upon the whole face of the globe —but when we recollect that the atmosphere not only entirely surrounds the earth, but extends in every direction about 45 miles—"and if the whole acid were collected in a stratum or bed occupying the lower part of the atmosphere, such a stratum would have a thickness of about thirteen feet;" and this would be spread over the entire waters of the oceans, seas, lakes and rivers, the deserts of sand, the frozen regions of the poles, and in fact over every part and place of the globe that does not yield a vegetable growth, and by the wisdom of the great Contriver, this gas is, in innumerable ways, returned to the air as fast as abstracted; here then our wonder ceases. Now, from 40 to 50 per cent by right, of all trees, plants and vegetables, and in fact all the parts of plants which are cultivated for the food of animals, or of man, consists of carbon, and unquestionably most of this is derived from the air—although there can be no doubt that a small portion is taken in by the roots, mixed with water, and some of the inorganic substances that are in solution—but this was also derived from the air.

The leaves of plants are their lungs, and they have the powers of taking in or absorbing from the air the carbonic acid, and in daylight this gas is decomposed, but much more rapid and energetic in clear sunlight. This gas is composed of two proportions of oxygen and one of carbon, and when decomposed in the leaf, the oxygen is set free and escapes into the air—the carbon is retained, and in obedience to those mysterious laws of chemical combinations, is made to form a moiety of the endless variety of wood, fruit, seeds, &c. &c. that grow upon the earth.

In proof of this, I will offer the following illustration. We know, if we take a given quantity (by weight) of well seasoned wood and distil it in a close vessel, or burn it in heaps covered over so as to exclude the free acces of air, wood-charcoal is left behind. When this process is well performed, the charcoal will weigh from 40 to 50 per cent as much as the wood did. The charcoal consists of carbon, with a slight admixture only of earthy and saline matter which remains behind when the coal or carbon is burned in the open air. When this charcoal (or carbon) is burned in the open air, it combines with the oxygen (which is seperated from the nitrogen) of the air to keep up combustion, and the whole of the coal enters into combination with the oxygen and forms carbonic acid—or, in other words, carbonic acid consists of oxygen with a quantity of charcoal *dissolved* in it, and this is precisely the gas that escapes from a barrel of fermenting beer or cider, and in this condition it is *fitted* to be again taken in by the leaves of plants and reconverted into wood, fruit, seeds &c. &c., and this process has been going on without intermission from the first morn of time down to the present day.

Perhaps it may seem somewhat mysterious to many *or* all, how this elastic invisible gas can be converted into wood or other solid substance, but it is no more wonderful than many other of its combinations. Every 100 lbs. of pure marble or limestone as taken from the quarry, contains in round numbers 44 lbs. of this very gas; by subjecting the marble to a strong red heat, this gas is driven off, and leaves but 56 lbs. of lime. In this town there is a pearl-ash factory. In every 100 lbs. of pearlash, the manufacturer sends to Boston, there is 32 lbs. of this gas combined with 68 lbs. of caustic pearlash, or to place it in another point of view, in sending 70 lbs. of pearlash, 22 lbs. of it is carbonic acid. The pearlash is taken to the distillery, and a current of carbonic acid is made to pass through it, when another portion of the acid is made to combine, and the 70 lbs. of pearlash come out 92 lbs. of salæratus,—that is, 22 lbs. more of this gas is fixed in the pearlash. At the distilleries this gas is disengaged from the molasses and water while fermenting, preparatory to its being distilled into spirit. Now can any one tell how this 44 lbs. of gas got combined with 66 lbs of lime, so as to form 100 lbs. of marble? or how 44 lbs. of carbonic acid entered into combination with 48 lbs. of caustic potash to make 92 o salæratus? If a pound of charcoal is burned in a close vessel of oxygen gas sufficient to keep up combustion till the whole of the coal is consumed, there is neither gain nor loss in the weight, the pound of charcoal is *dissolved* iu the oxygen, and the gas weighs a pound more than it did before combustion commenced, and what is still more strange the volume or bulk of the gas is not increased by the addition of the pound of charcoal or carbon. The quality or nature of the gas is materially changed—being converted into carbonic acid. Perhaps no one can tell, or perfectly understand the "modus operandi" of the above, but of the truth of the statements we are as confident as we are that two and two make four. It is well known that lichens and mosses will grow and thrive upon the solid rocks. Aaron's rod and some other plants will flourish and gain in weight suspended in the air. The roots of a hyacinth, when the bulb is placed over a glass vase of water, will descend into it, the leaves and flowery stem will shoot upwards, and in a few weeks an abundance of beautiful and fragrant flowers are produced; during this time the water is not changed nor any manure added, and perhaps the whole plant when in bloom will weigh twice as much as it did when placed in the vase. Now from what source do these plants draw their growth but from the air? But some may say this is on too small a scale to satisfy them; then we will take it upon a larger one. We know, if we take crop after crop from a given piece of land, without returning any thing in the form of manure, it is yearly impoverished till at last it will scarcely produce any thing.—The reason of this is, we carry from the land all that is derived from the air, and all that is drawn from the soil, *the inorganic parts of plants*, which are just as necessary as the carbon; the soil thus becomes destitute of it—part of the funds necessary to carry on the co-partnership—but the air is always solvent, ready to meet its engagements at sight, and contribute its full quota in proportion with the other part of the joint concern, and no farther. But if this impoverished soil is sown with the seeds of some kinds of trees and they vegetate and grow, the longer they stand and the larger they grow, the richer and more fertile the soil becomes. If this growth of trees had derived its whole food from the soil, it would have been poorer than when it was planted; but as that is not the fact, we can come to no other conclusion than that the *food* for the carbon of the trees was drawn from the carbonic acid of the air, and the other organic substances from the air—water and the soil.

The inorganic matters that enter into the composition of plants, silex, lime, potash, soda, gypsum, &c. are drawn wholly from the soil, gradually supplied by the mineral constituents of the soil, which generally yield them as fast as required for the growth of forest trees, without the aid or application of them by the hand of man. But not so with our cultivated crops, they are annually carried from the land, and to keep up the fertility of the soil, the inorganic matter must be returned in a more soluble form than they exist in the mineral constituents of crops which do not decompose fast enough to supply annual crops of corn and grain for a very long series of years.—Please excuse the length, and repetitions in this; my object is to be understood by that class who are not familiar with "agricultural chemistry." Yours truly,

Levi Bartlett.

Warner, N. H. Dec. 24, 1844.

New Mill Dog.—We have examined a new *breed* of mill dogs.—Every one knows the old mode of holding logs in a mill while they are being sawed, and what a thrashing and pounding and prying there is, when a heavy log is on, every time you wish to set it for a new cut. But the new one will do it "*just as easy.*" All you have to do is to lift up a brake and let it down again, and it is all done as true as a "jigger's eye." No knocking and smiting with the end of the bar—no noise or fuss. Any boy big enough to swing a batstick can do it. If you want one for your mill, I. G. Johnson, just across the river, will make you a neat one. If you have a saw-mill, be sure and get a set, before you maul your old cant-dogs all up by battering them a hundred times a day.—*Maine Farmer.*

Te winter continues almost unprecedently mild.

LEGISLATIVE AGRICULTURAL CONVERSATIONS.

The members of the Massachusetts Legislature have at their present session resumed their agricultural conversations. At their first meeting the Hon. Levi Lincoln was chosen president. After the appointment of officers and some desultory remarks were made by several gentlemen upon the Rot in potatoes, the following *subject* was appointed for discussion at the next meeting:—

"What are the most probable causes and preventives of the disease in potatoes, which has prevailed through many portions of the country the past season?"

As the two last seasons have been particularly fatal to the potatoe crop, and the loss from the Rot in the last, is supposed to have amounted to a million of dollars, it may be interesting to know the views of the enlightened agriculturists of Massachusetts, coming together as the members of the legislature of that state do from every section of it; we therefore give the discussion of the second meeting entire.

AGRICULTURAL MEETINGS AT THE STATE HOUSE.

The second Agricultural Meeting was held on Tuesday evening, in the hall of the House of Representatives, Hon. LEVI LINCOLN presiding.

The subject of discussion was: the causes and preventatives of the prevailing disease in the Potato.

The discussion was opened by Mr. TESCHEMACHER. He remarked that the disease was not new, having prevailed in many parts of Europe for many years. He read extracts from a pamphlet of a Mr. Aitken, published in Edinburg in 1837, in which the rise and progress of the disease were described, and in which it was stated, that although the subject had often been brought before the public, and examined, and various theories respecting it advanced, there was still a Babel-like confusion of conflicting opinions in regard both to the cause and preventative of the disease, and the public were left in uncertainty in regard to it. The remedy proposed by Mr. Aitkin was fresh seed, under the idea which he seemed to entertain, that the potato had "run out."

Mr. Teschemacher stated that he had made examinations of potatoes in between one and two hundred cases, and that from the appearances he had generally discovered, he had been led to the opinion that the disease arose from a fungus vegetation in the interior of the potato. In advanced stages of the disease, he had noticed worms, such as might always be seen in the mushrooms. In potatoes where the disease had but just commenced, exhibiting itself by a yellowish brown appearance about a quarter of an inch under the skin, there were no worms. Apparently the worms did not attack the potato till the disease had progressed considerably. In this advanced stage, with the aid of a microscope, the worms, being transparent, might be seen to feed and void, till they become enveloped in a mass of putrescence, very offensive to the smell. Under the impression that the disease was a fungus, Mr. T. said he had submitted it to the action of salt, lime, arsenic, sulphate of copper, muriate of lime, &c. All these substances, the salt especially, killed the worms, and dissolved the particles except very minute bodies which he call spores, and which could only be observed by a microscope of high magnifying power. It might be well, he thought, to try muriate of lime as a preventative. He had endeavored to propugate the disease, by placing sound and diseased potatoes, cut open, in immediate contact and in coarse of three weeks the sound potato was infected equally with the other. The fungus he considered as not materially differing from the smut in corn and wheat.

Mr. BUCKMINSTER said there were some facts in reference to this disease which favored the idea that it was caused by heat. Last summer, particularly in the last part, and in September, there had been, he said, an unusual quantity of heat. The disease, too, had prevailed most extensively where potatoes had been manured in the hill, or where the most manure had been used. This also favored the idea of heat being the cause.

Mr. DODGE, of Hamilton, stated that one kind of potato (blue) which he planted, was extensively diseased, while the same kind, sold by him to several of his neighbors, and planted by them, were entirely free from disease. His were not manured in hill, and those of his neighbors were. The disease in his potatoes did not advance far, but seemed to come to a stop. There was no smell; and he had always fed his swine with them without bad effects. He thought heat could not be the cause, or all potatoes would be affected alike. The long red kind, in his neighborhood, were universally good; and the hot weather had not extended to all parts of the country where the disease had prevailed. He thought there might be some virtue in salt in preventing the disease, and said that where sea-weed and kelp had been used for manure there had been no disease.

Mr GLEANSON, of Wayland, said his potatoes were generally much diseased, and were very offensive upon digging, while his neighbor, whose field adjoined his, found none rotten. Where he manured most, the potatoes were most diseased. Where he used manure composed of two-thirds peat, he found none rotten.

Mr. FAY, of Southboro', said he observed that where the potato vines had died very suddenly, the potatoes were diseased on digging; and that before the vines were dead no disease could be discovered in the potatoes. Where vines died so suddenly, he had noticed an offensive smell, which could be perceived at some distance from the field. He had known of no diseased potatoes in cases where the vines were not diseased. He was led from these facts to conclude that the disease commenced above ground, and proceeded downwards. As far as his observation extended, the disease had prevailed most in potatoes planted on old ground, and was worse in those planted on low ground. Those planted on high lands had generally escaped. He had planted three kinds, the blue, long blue (or veto) and long red, making the same application of manure in all cases, and planting all about the same time. The blues were most affected, and the long reds almost entirely escaped. He had fed his stock with diseased potatoes without harm to them.

Mr. Campbell, of Chester, said he invariably found that where the vines blasted and decayed suddenly, the potatoes were bad. He dug some in one field where the vines were not blasted, and found them good; but in a week afterwards the vines became affected, and decayed, and the potatoes were then unfit for use. He was of the opinion that the disease was owing to some atmospheric influence.

Mr. Brackett of Starbridge, was of an impression that potatoes planted earliest were least affected with the disease. This was the result of his own observation. He had found the vines to be first affected, and that their decay was very sudden and rapid. In some instances vines were prostrated in a single day.

Mr. DODGE remarked, in relation to early planting, that in his case, some chenangoes planted very early were not diseased at all; and long reds, planted late, as late as the 10th of June, were likewise unaffected; while blues, planted at an intervening period, were diseased. In regard to the vines, he had noticed something very singular. The vines of the long reds, which are usually green and vigorous through the fall drought, this year, in his case, drooped and died prematurely, and yet the potatoes were good. Another thing he had noticed was, that there were this year very few potato balls on the vines. In relation to what Mr. Fay had observed respecting high and low grounds, Mr. D. said his experience had been entirely different. His diseased potatoes were on his highest land, indeed on quite a high hill. In his corn-fields near his diseased potatoes, there was a good deal of smut in the corn.

Mr. SANGER, of Dover, said that in Norfolk county, where the drought had been severe, the vines of the long red potato continued green till frost, and the potatoes were wholly unaffected. As to balls, he had never seen so many as this year.

Mr. ALLEN, of Plymouth, spoke of the experience of a friend in his neighborhood, who planted a field of potatoes on land which had a descent both towards and from the sun. The potatoes on the southern exposure was greatly affected, while those on the northern exposure were not affected at all. This seemed to favor the idea that a superabundance of heat caused the disease. He thought but little importance should be attached to the sudden decay of the vines. In reference to the general escape of the long reds, he said that in Plymouth county there were more affected than others. As a general thing, he was in favor of late planting; and so far as he had learned, the past season, potatoes planted late had been least affected.

Mr. EARLE, of Worcester, said he had made very extensive inquiries in Worcester county, and found that in all cases, potatoes planted early had been least affected. Chenangoes of early planting had escaped, while those of late planting were diseased. As early potatoes were always exposed to the greatest amount of heat, this fact, he thought, was against the theory of heat being the cause of the disease. Moreover, the disease had been developed in many cases before the heat of September, which had been referred to.

Mr. DILLINGHAM, of the Senate, stated, in reference to what had been said about the good effects of sea weed, that he had planted an acre of potatoes, one half with long reds and half with chenangoes. The long reds were manured with sea-weed and kelp, the chenangoes with barn manure. The long reds were diseased and the chenangoes were not. The vines of the long reds which were diseased, continued green till frost.

Mr. COLE (editor of the Cultivator) said he considered the disease to be caused by some atmospheric influence, and the great object was to find a remedy. He stated a case which occured in New Jersey. In 1843 a gentleman found his potatoes diseased. Next year he planted the same kind, putting a spoonful of slacked lime in each hill, and a mixture of lime and ashes around the hill after the potatoes had come up, and his potatoes were good, while those of his neighbors were bad.

Mr. FOOTE, of Williamstown, stated a single fact, the only one, he said, which had come to his knowledge which was conclusive. He had been informed by a gentleman from New York, who was a practical chemist, that last spring, in preparing his land for planting potatoes, he mixed with his manure a large proportion of pulverised charcoal, the effect of which was to preserve his potatoes entirely from disease, while those of his neighbors were badly affected.

The discussion here closed, the Chairman remarking, that the result of the whole was very much like the conclusion to which a celebrated physician came, who was called upon, on the first appearance of the spotted fever in this country, to express his opinion as to the appearance, symptoms and consequences of that dreadful disease. After a careful and minute examination of a case, in which there was a consultation of the faculty, the physician was asked by one of his brethren, what he called the disease. He answered, "I call it *death*." So, said the Chairman, destruction to the potato is pretty much all the conclusion we have arrived at in the discussion of the evening.

The subject announced for discussion next Tuesday evening was: "What is the best mode of managing grass lands?"—*Boston Traveller.*

From the Magazine of Horticulture.

ON THE CULTIVATION OF LETTUCE, *so as to produce successive crops the year through.*

By J. W. RUSSELL, Newton, Mass.

As lettuce is more or less used in every family, the mode of obtaining it in the greatest perfection, throughout the year, in regular succession, may not be unacceptable to a portion of your readers.

Lettuce is grown in considerable quantities for the market, and fine heads may be obtained nearly the winter through; in the months of December and January, owing to our severe weather, it cannot be grown as large as it can in the climate of England, without too much care and expense; but later, when hot-beds do not suffer from extreme frost, it may be had in the greatest perfection. Notwithstanding lettuce may be found in the market of such excellence, few individuals, except market gardeners, understand its cultivation during the winter, and on this account many gentlemen are deprived of this desirable vegetable during that season, when it adds so much to the luxury of the table.

The following remarks are the results of several years cultivation of lettuce, both for private use and for the market; and if the directions are carefully followed others may be equally successful.

Selection of Sorts.—There are a few leading points to be strictly adhered to, and which ought not to be overlooked, if lettuce of a superior quality is the object of the cultivator. The Tennisball, Royal Cape, and Green Curled Silesia, are probably the best for spring use; the Imperial (true) is the most worthy of the cultivator's trouble, in order to have a good supply through the summer; and the Green Cabbage, or hardy Hammersmith, for the winter crop. It is of the greatest importance to obtain the seed *true* to the name, and not hybridized; what makes the careful selection of the seed of so much con-

sequence is, that all the care and labor bestowed on the culture of the plants, if raised from spurious seed, approaches very nearly to labor lost. It is well known, although not so universally as could be wished, that a great portion of the varieties enumerated in catalogues are not worth growing in this climate; the Cos lettuce, so much cultivated in England, and deservedly so, is rarely ever seen in our markets; in fact, all the hybrid varieties, raised from the Cos and Cabbage lettuces, being intermixed, will not generally be such as would give satisfaction in this country, and more especially if the variety partakes most of the Cos parent. Observe therefore to procure choice seed of *responsible* seedsmen.

Compost for the Plants.—A light, rich, friable soil, and old hot-bed manure,—or manure that is as near as can be of the same nature,—well blended together, will ensure success; for framing, the compost should be an equal quantity of manure and earth; this is the secret of obtaining fine lettuce; for wherever extra fine lettuce is found, extra culture produced it. For open air culture, the ground, however rich it may be in appearance, if not by the recent application of manure, ought to have a bountiful dressing, which should be dug in about three inches below the surface; but before this the ground should have been in fine condition, either by deep ploughing or digging; the reason why the manure should not be buried deeper than proposed is, that the roots may take hold of it at once, and that the plants may make a rapid and luxuriant growth.

Sowing the Seed.—To have a regular succession throughout the year, several sowings will be necessary. The first, or spring crop, should be planted from the 15th of February to the 1st of March; the second, or summer crop, during April; and successive sowings in June and August. For the last, or winter crop, the 15th to the 30th of September is the proper period. The seeds generally appear the fourth or fifth day, and the first transplanting should take place ten or twelve days subsequent to their appearance.

Cultivation of the Spring Crop.—Early in February prepare a small hot-bed, unless one is already made up for cucumbers, and the seed of the Tennisball, or Royal Cape, may be planted in flower-pots or boxes. It must be borne in mind that only a moderate heat is required for starting the plants from seed. Six inches from the glass is a proper distance for the young plants; give all the light possible through the day, and air every day that the weather will admit of it; the frame must be well secured from frost, which would destroy the plants, and it should be covered every night as long as the cold freezing weather lasts. The plants will require to be twice transplanted—first, from the seed-pots or boxes, about three inches apart, each way, in order to become strong, healthy plants, for their final removal to the beds where they are to remain. This may appear to those persons not already acquainted with the process, to be superfluous; however, it is the only way to succeed. The final transplanting out into frames should take place as soon as the plants are ready, —if the Tennisball and Royal Cape, or Silesia, about nine inches apart, each way, will be found to be a proper distance. Regular attendance to the watering, giving air every favorable opportunity, and covering over the frames every night in season, is all that is necessary to ensure fine early lettuce.

Cultivation in the open air.—Early in April seeds of the Tennisball should be again sown, and the plants will be ready by the middle of May to transplant. It will be necessary at this season to allow about fifteen inches between the rows, in order to admit the Dutch hoe, or scuffle, to advantage, which should be frequently used. The Imperial should succeed the crop of Tennisball and Silesia, and the first of May the plants will be in readiness. Continue to plant as before advised, every month or six weeks, from early spring to autumn, and select a cool situation for the late summer crops.

Cultivation of the Winter Crop.—This is the sowing requiring the most attention, and which is to supply the table from January to March. Select a warm situation in the open ground, and manure the bed well, and dig it deep; make the surface level and smooth with a fine rake, and it is then ready for the seed. The Hardy Hammersmith is the variety to sow now; draw the drills three inches apart, and cover the seeds lightly. In a few days they will be up and grow rapidly—and in October they should be transplanted into beds; where they are to be protected from frost. These should be common hot-bed frames; and as soon as the nights become cool the sashes should be put on, removing them early every fair day. On the approach of severe cold secure the plants from the effects of frost in season, for freezing and thawing would nearly destroy the whole. Very little water will be needed, unless there should be a continuance of fine weather, till Christmas, when they will require moderate waterings. Give all the light and air possible, and keep the plants clean and free from damp, by picking off all decayed leaves as soon as perceived.

In December the plants will be very strong and stocky, and ready for removal to hot-beds, or pits in the greenhouse, where, with the ordinary treatment, they will soon form fine large heads. From time to time, as a succession is wanted, the plants can be transplanted from frames to heat, until the season arrives for the spring crop.

THE DAIRY—NEW ENGLAND BUTTER MAKING.

We extract from the Report and Statements, presented by the Committee of the Essex Agricultural Society, on the Dairy, such portions as will be most interesting to our readers:—*Salem Gaz.*

"The Committee on the Dairy, in presenting their Report, would remark that the first prerequsite in making good butter is to have good cows. And to be sure in this respect, every farmer shonld test the value of each cow by milking and preserving her milk seperately, and noting carefully the quantity required to make a pound of butter. By a very little attention in this way, it may be readily ascertained whether a cow is worth keeping for Dairy purposes.—Cases have occurred where a cow has been kept for years with several others and their milk put together, on using it seperately, it was found that butter could not be made from it. Thus for the want of attention in this respect, much loss may be sustained. There are undoubtedly, many cows kept which add little or nothing to the value of the dairy.

The kind and quantity of salt used, is of much consequence. The Liverpool bag salt should be rejected; it contains impurities, and will not preserve butter. Rock salt perfectly pulverized, and three-fourths of an ounce used to a pound of butter, will preserve it well.

Process of making Butter by those who gained the Society's premiums:

By George W. Dodge.—The milk is strained into tin pans, where it stands from thirty-six to forty eight hours, when it is skimmed and the cream put into tin pails, standing on the bottom of a cool cellar. A little salt is added to the cream which is frequently stirred. We churn twice a week. When the butter comes, the butter-milk is thoroughly worked out, and the butter salted with an ounce to the pound.—After twenty-four hours it is again worked and weighed.

By Mrs. Abi Worchester.—The cream was churned twice a week, then the butter was washed in cold water. One ounce of fine butter salt was used to one pound of butter, and well worked in. After it had remained twenty four hours, it was worked over and packed down solid in a stone pot and covered with strong brine.

By Paul Pillsbury.—The milk is strained into tin pans and stands thirty-six hours. The cream is then taken off and put into a tin firkin, and kept until it is ready to be churned, which is twice a week. The butter is well rinsed in cold water and then salted with one ounce of salt to a pound of butter. In about twenty four hours it is worked again and packed down and kept on the bottom of the cellar, covered with fine salt. The feed of the cows was a common pasture.

By Allen W. Dodge.—Treatment of milk and cream before churning:—Strain the milk in tin pans, place them in a cool cellar for the cream to rise; when sufficiently risen, which will be according to the weather, separate the cream from the milk, and the day previous to churning, lower the cream in tin pails or cans, into a well, in order to become cool. By this means, the butter will come of a hard consistency, and no difficulty experienced in working it thoroughly.

Mode of churning:—Rinse the churn with cold water over night. The churn is Galt's—various other kinds have been tried, such as the barrel churn, and the rocking churn, but with less favorable results. The time occupied in churning, when the cream is cold, is greater than if it was not subjected to the process of cooling, but the quality and condition of the butter amply repay for the time and labor expended upon it. Churn once a week.

The method of freeing the butter from the milk, is by thoroughly working the butter with the hands. Rinsing it with cold water, in the churn, we have seldom practiced, from the conviction that the butter is injured by this process. The day after being worked over, it is put into lumps of one pound each, for market.

Salting of the butter. Use the ground rock salt, and salt to suit the taste. Add no saltpetre, sugar, or other substances.

By Nathaniel Felton.—The milk is strained into tin pans: it stands from thirty-six to forty-eight hours in a cool cellar, when the cream is taken off, put into tin pails, and stired every day. We churn once a week; during the warmest weather the cream is placed in the well about twelve hours before churning. After it is churned the butter-milk is thoroughly worked out and the butter is salted with three quarters of an ounce to the pound. After standing about an hour it is again worked and weighed, each pound seprrately.

By Benjamin Boynton.—The milk is strained into tin pans. It stands forty-eight hours in a cool cellar when the cream is taken off, put into a pot and stirred once a day. We churn once a week. After the butter is churned the butter-milk is turned from it, and water is added twice, and churned to seperate the butter-milk from it. One ounce of salt is used to a pound of butter, which is worked twice after."

ORNAMENTAL GARDENING.—In Colman's late writings on European agriculture, we find the following:

"The cultivation of flowers and shrubs and vines is a remarkable and prominent feature in the landscape of England; and a circumstance which has given no little gratification to my national pride, has been the profusion of American plants, which are seen in the shrubberies and plantations and pleasure grounds, both public and private. Green houses and conservatories are almost universal in the country where any thing like a garden exists; and the better class of houses surrounded and adorned with a great variety of flowering shrubs and plants, presenting through the season a charming succession of gay and brilliant ornaments. Even the laborer's humble cottage, too seldom, I am compelled to admit, anything but a picturesque object, will occasionally have its ornamental shrubs adorning its doorway, and the ivy hanging its beautiful tresses over its window, forming as it were a mirror set in a frame of the richest green. The village of Marr, in Yorkshire, not far from Doncaster, and the village of Edensor, in Derbyshire, near Chatsworth, and the village of Lord Brownlow, in Lincolnshire, the best built, and by far the handsomest villages I have yet seen in England, to cottages of an excellent and picturesque construction, add those beautiful rural embellishments of vines and shrubs and flowers, and at the first blush compel a reflecting mind to admit the moral influence of such arrangements upon the character and manners of their inhabitants.

"I have said and written a great deal to my contrymen about the cultivation of flowers, ornamental gardening and rural embellishments; and I would read them a homily on the subject every day of every remaining year of my life, if I thought it would induce them to make this a matter of particular attention and care. When a man asks me what is the use of shrubs and flowers? my first impulse is always *to look under his hat and see the length of his ears.* I am heartily sick of measuring every thing by a standard of mere utility and profit; and as heartily do I pity the man who can see no good in life but in the pecuniary gain, or in the mere animal indulgencies of eating and drinking."

A New Remedy for Tooth-ache.—Among the thousand remedies for tooth-ache, caoutchouc is now stated to be a very efficacious one. A piece of caoutchouc is to be put on a wire, then melted at the flame of a candle, and pressed while warm, into the hollow tooth, and the pain will cease instantly. The cavity of the tooth should first be cleaned out with a piece of cotton. In consequence of the viscosity and adhesiveness of the caoutchouc, the air is completely prevented from coming into contact with the denuded nerve, and thus the cause of the tooth-ache is destroyed.

A Cure.—It is said that the syrup produced by sliced raw onions, with loaf Sugar grated between them, and simmered before a fire, is a cure for the colds and hoarseness that now abounds in the city. It should be taken just before going to bed, and the feet should also be simmered, or rather toasted at the same time.

THE AMERICAN FARMER.

PUBLISHED BY SAMUEL SANDS.

☞We are forwarding to our patrons their bills for the amounts severally due for subscriptions to the "*American Farmer*," and respectfully call upon them to remit the same as early as possible. We tender our thanks to those who have been prompt in their settlements, and would urge upon others to follow their laudable example—Some few of our friends, we are constrained to say, are so dilatory in their payments, that we might be almost induced to conclude that they are possessed of the idea that printers, like the chamelion, can live upon air, as they have failed for several years to make us any remittances. We earnestly appeal to the sense of justice of all such, to remedy this practice, and to "do as they would be done by" hereafter.

☞We have again been favored by the Hon. Mr. Ellsworth, Commissioner of Patents, with several small parcels of Seeds, which will be distributed to such of our friends as may desire to experiment with them. They consist of

Tuscany Winter Wheat,
Improved Dutton Corn, produces 151 bushels to the acre,
Small Corn for pickling,
Egyptian Corn,
Low Pear Tree Tobacco, fine gold silky leaf,
California Tobacco,
Genuine Havana Tobacco—and
Brown Mustard, for field crop, crop of 27 acres, brought $1,600.

GUANO—It will be seen by Mr. S. K. George's advertisement, that he has *reduced the price of his Peruvian Guano*, and we would press it upon the notice of planters and farmers, that, at his present prices, a very rair opportunity is offered them of testing its value. Of its active fertilizing properties we have no doubt, nor have we any that it is the cheapest manure that can be used; and in this latter opinion, we will be borne out by all nice calculators, when it is considered that *two hundred* pounds are sufficient for an acre, as the labor in hauling and spreading is so trifling, when compared with that of barn yard manure, as to make the *saving of money* more than an equivalent for the cost of the *Guano*, to say nothing of the value of the time economised.

From the experiments already made by some of the most intelligent tobacco planters, we do think that all should procure a supply for their *plant beds*, if not for their entire crops. Wheat and corn growers too, should purchase a sufficiency to test its relative value, when compared with other manures. So far as the experiments and analyses of Prof. *Teschmacher* go, they not only demonstrate that it greatly increases the *yield* of corn but *increases* its quantum of nutrition also. And as to its adaptation to the wheat crop, the experience of English farmers justify the belief, that it very largely contributes to enhance the product of that grain.

A good Compost for Sandy Land.

Take 10 loads of stable or barn-yard manure, 5 loads of clay, 10 bushels of ashes, and 20 bushels of lime, mix the whole well together, let it remain in pile a few days, turn it over, when it will be fit to apply to the land.

The above quantity will make a better dressing for an acre of sand than twenty, or even twenty five loads of stable or barn-yard manure alone, and will last longer. Let any one who may doubt, try it, and they will be convinced of the truth of what we say.

Yellow Locust.

If you have but little fencing timber fit for posts on your farm, sow a few pounds of yellow locust seed, and when the plants are two years old they may be transplanted. In twelve years from the time the seed is sown you may begin to cut them for posts. Say you, twelve years is a long time to wait; but you should recollect, that every farmer has some spot where they might be grown, and that, as fencing is a dear article, every farmer should endeavor to grow his own timber.

WORK FOR FEBRUARY.

Before our present number will have reached one-half of our subscribers, *February* will have been ushered into being, to challenge the attention of our Agricultural brethren to meet the responsibilities which it brings with it. For although the earth may be locked up, in a large portion of this our land of diversified climates, still there is no part where this month does not call forth the labors of the head and the hands, while there are other parts where the business—the active and unceasing business—of the agriculturist begins—where each day will bring forth its toils—where the mind will be incessantly called upon to direct, and the hands to execute those multifarious plans of operation, by which the crops of the season are committed to the earth and nurtured into fruitfulness.

Indeed, it would be conducive to the interests of the Agriculturist, if during the early part of February, he would lay down all his plans of operations for the season, so that as each month should revolve around, he would have nothing to do but turn to his Memorandum Book and carry out these plans; for, of a certainty, it is to the interest of all who make a living out of the earth to mature in advance every operation connected with his calling—as those operations which are digested after well directed reflection, are the most sure of being crowned with success; for let others say and think what they may, we believe that intelligence is as essential in conducting the business of a farm or plantation, as it is in any other of the various callings of mankind. With this brief introduction, let us pass to the fields and see what requires attention

On the Farm.

Tobacco Beds.—These should be now attented to, and as *Guano* is said to be preventive of the ravages of the Fly, let all planters within the range of the source of supply—Baltimore—procure a sufficient quantity to test the fact whether it does or does not possess this property. But independently of this property, ascribed to it by good tobacco planters, it has the power of promoting the growth of the plants beyond, perhaps, almost any other kind of manure.

Timber and Fencing.—Do not let this month pass without having felled and prepared all the timber which you may desire for all purposes on your farm, whether for the erection of new buildings, the repair of old ones, or for fencing.

Fire Wood.—If you have not already cut down sufficient fire-wood to last you through the next spring, summer, and fall, complete this part of your *duty* at once.

Fences.—Examine every pannel of fence upon your estate, and make whatever repairs may be necessary without farther delay. Rest assured, that procrastination in a matter so important never fails to bring its own punishment with it—and while you are subjecting your fences to the ordeal of a scrutinizing inspection, be sure to look well to your *bars* and gates. If it be within your means and time, substitute good substantial gates for any bars you may have: if you cannot just now encounter this labor and expense, *see* that your *bars* have good fastening pins.

Repairs and white-washing of Out-buildings.—Submit every out-building on your place to a searching examination, repair every one which needs it. This done, make yourself a white-wash after this fashion: Dissolve two pounds of potash in five gallons of water, then add 2 lbs. of alum, and when that is dissolved, add 10 lbs. of wheat flour, make the whole into a paste by stirring in the flour a little at a time—then in another tub slack as much lime as you desire to use, and when cold incorporate it with the first, and apply it to all parts of your buildings, both inside and out, roofs and all, and you will not only have put on a beautiful and durable whitewash, but one which will render your wood-work as nearly incombustible as is desirable.

Corn and Ground.—It is full time in many of the Southern states to be making arrangements for preparing the ground intended for corn, and in view of this fact, we deem it our duty to advise that deep ploughing be attended to, though the hard pan may be disturbed, as in that very *hard pan* potash may be found to give stability and strength to the corn-stalks.

Working Horses, Oxen and Mules.—Let it be the duty of all to see that these faithful animals receive increased attention as to currying, and brushing, and that they get plenty of good feed, in order that they may be in good condition when the period arrives to put their strength in requisition. And while all proper attention is paid in the way of feeding, see that twice a week they receive supplies of salt and linseed meal. If it should not be convenient to procure linseed meal substitute Buckwheat meal—say, that you give them a pint of the latter twice a week with their other grain feed.

Milch and in calf Cows.—These animals should receive good nourishing slops at this season of the year, and you could not probably give them more nourishing messes than slops formed of cob-meal. See too, that they are regularly watered twice daily, and that they receive twice a week a gill of salt, each.

If any of them have lice upon them rub the infested parts with strong brine, a decoction of Cockspur, or of tobacco.

And to prevent hollow horn, pour a tea-spoonful of spirits of turpentine in the cavity or cup just behind the horns—one or two applications of this kind will prevent the occurrence of the disease, and as *prevention* is better than *cure*, see to it that no necessity for the latter occurs.

Ewes in lamb.—Let these receive a portion of meal of some kind each day with their hay, and occasional feeds of roots, as it is important they should be in vigorous health and good flesh when they bring forth their young. Do not neglect to salt them and provide them with pine bows, to browse upon—or a mixture of tar and salt.

Breeding Sows.—See that your breeding sows are well fed with nourishing slops or roots—that they receive portions of salt and ashes and charcoal every few days, and that their sleeping apartments are warm and well bedded with *cut* straw or leaves.

Poultry.—Have your Hen house, nests and roosts thoroughly cleansed—then white-wash the interior and exterior, not forgetting the nests and roosts. Put fresh hay into the nests, taking care to sprinkle unleached ashes over them—provide your fowls with lime to pick, and ashes and sand to dust themselves in—give fresh meat chopped up fine twice a week, and see that they get grain or boiled potatoes daily, and twice a week cabbage or turnips cut fine—and having observed to do what we recommend, you may look forward to a plentiful supply of eggs and early chickens.

Extend the same treatment to your other poultry—and recollect that you must pay attention throughout the season to the cleansing of all of your poultry houses, as without it you cannot be successful.

Young Stock of all kinds must receive attention at this season—keep them clean—comfortably housed, and properly fed and watered.

Hauling out Manure.—See to your Dung piles, and haul out all you may intend to use in your spring crops. To prevent the waste of the ammonia, either cover each load over with earth, or mix it with Plaster or Charcoal, in the proportion of a bushel of the former to 20 loads, or 20 bushels of the latter to the same number of loads.

Wheat fields.—Examine your water furrows and clean them out.

Implements and Tools, Carts and Gearing.—Submit these to a scrutinizing examination—repair all that require it, and have them in place to be used whenever you may need them. Recollect that no good manager neglects this duty.

Fruit Trees.—Prune off all dead limbs before the sap rises—cut in to the sound wood and apply a composition made of equal parts of clay and fresh cow dung to the wound, which must be made perfectly *smooth*.

Make a mixture of soft soap and flour of sulphur, and plant the bodies of your fruit trees with it—1 lb. of the flour of sulphur is enough for ten gallons of soft soap—put it on with a painter's, or white wash brush, from the ground up as far as you can reach.

Having cursorily noticed the operations on the farm, it is meet we should take a peep into

The Garden.

Grape Vines.—Prune your grape-vines; and if any of the wounds bleed, apply a potato to the point of the limb cut off. In pruning cut off the old wood.

Hot Beds.—You should prepare your beds and sow all varieties of seed therein, as Early Cabbages, Lettuce, Radishes, Tomatoes, Egg Plants, Oyster Plants, Celery, Spinage, Parsley, Time, &c.

Early Peas.—As soon as you can prepare the ground, early peas may be sown, without any fear from injury by the frost. The Pea is a hardy plant, is very tenacious of life, and can stand both a keen and freezing air without drooping its head.

Celery.—If you have a good warm border facing the south, prepare it by heavy manuring, deep digging and thorough pulverization—then sow Celery seed and cover over the bed with long straw.

Currants, Gooseberries and Raspberries.—Prune each of these and tie up the latter.

Annual Flower seeds of all kinds may be sown as soon as the ground is dry enough to be put in good tilth.

Before we close, let us advise you, if you have not already provided yourself with an Orchard, and fruit trees generally, to make arrangements to plant the ensuing spring, as no farm can be said to be well appointed where good fruit does not abound.

Mode of applying Lime—Rotation of Crops.

We are under obligations to the Hon. *John S. Skinner*, for permission to publish the following extracts from two letters received by him from one of the most successful as well as distinguished farmers of Maryland. The subjects upon which the writer treats, are—1, *the application of Lime*—and 2, *the proper rotation of crops*,—and, as it will be perceived, he differs upon both points with Dr. *Darlington*, whose admirable papers our readers have doubtless read with pleasure. It does not become us to play the part of umpire between the two distinguished individuals, and will, therefore, content ourself with saying, that the writer of the extracts, which follow has done more with *lime*, in converting *worn-out fields* into *fields of fruitfulness*, than any other gentleman in Maryland, and that, by his skill in its use, he has set an example, in the county in which he resides, whose influence will be felt long after he shall have been gathered to his fathers.

—

"*January 8th*, 1844.

"In a late number of the American Farmer, there was a communication from you, enclosing a letter from Dr. Darlington. The rotation of crops recommended by Dr. D. I consider a wretched one. In the first place by his course, the advantages to be derived from a clover crop, are lost—Clover, to improve land, should be sowed alone, and remain on the ground two years, then to be ploughed under as manure for a crop of wheat. Timothy to be sowed with wheat, at the rate of a peck to a half bushel per acre; the next year there will be a fine timothy field. He has three crops of grain in succession, which is contrary to every well established system of farming. Manure ought to be always applied fresh to the land in grass. If kept to be put on the wheat, more than one half of it is lost—and applying it immediately to the wheat crop has a tendency to make the wheat run to straw. In the application of lime, I think the proper system is to apply at once, what the land requires, say from one to two hundred bushels per acre, put in on the grass, and let the land remain three or four years in grass before it is ploughed. In this way I have never seen any injury from over liming; I have now placed on my land one hundred and sixty thousand bushels of unslacked stone lime—much of it has had two hundred bushels per acre; the greatest improvement has been made, where the heaviest liming has been attended with manure, or a clover crop turned under and the land rested."

"*January 15th*, 1845.

"Yours of the 10th is received—I omitted stating two other objections to Dr. D's. system—Clover and timothy together, in converting them into hay, one or the other must be sacrificed, owing to the difference in the time of their maturing. Clover ought to be cut the beginning of June, or when the blossoms begin to turn brown. Timothy is not fit to be mowed, till the seed is *fully ripe*, which, in this latitude, will be the last of July or commencement of August. I will detail to you the rotation I pursue with my arable land—A portion of my estate is in permanent pasture, owing to its remoteness, being broken, or bottom land, which is more profitable in pasture.

The first year Corn; second year, small grain, either Wheat, Rye or Oats, which depends on the condition of the land. Third year Clover, the first crop mowed, the second crop to remain on the ground without *being grazed*. Fourth year Clover to be ploughed under for wheat; if the land be in high condition, the clover may be moderately grazed. Fifth year, Wheat. Sixth year, Timothy mowed. Seventh year, Timothy mowed. Eighth year, in pasture. Ninth year, in pasture.

In the above rotation, you will observe that one third of the land is in grain, one third produces hay and nearly one third is in pasture. The manure is always applied fresh to the land when in timothy. If the field be remote from the homestead, I find it more economical to manure it, when in pasture, by feeding cattle on it in the winter, with the hay it produces the second summer, and the corn fodder and hay from the adjacent fields.

If the land require lime, it is to be applied while in pasture. The second objection to Dr. D's. course is, that it would be impossible on a farm of any size to haul out dung and apply it in time for a crop of wheat."

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We have also received the following communication upon the same subject, from an old and valued friend, who has devoted much attention thereto, both in practice as a farmer in one of the most fertile counties of the State, as also in theory, as a leading member of the Committee on Agriculture, in the Legislature of Maryland:

For the American Farmer.

Mr. Editor,—The following is submitted in reply to the queries of your correspondent "*Virginia;*" if it shall in a single case only cause two blades of grass to grow, where one only grew formerly, the writer will regard himself as amply compensated.

1. "What effect would be produced by the application of lime on the surface of limestone lands?"

Precisely the same as upon any other similarly constituted soil, where limestone do not exist—because analysis rarely shows more than a trace of lime in the soil of limestone lands; it cannot ascend from the rocks beneath, and where the rock rises above the surface its disintegration at most could only have a local effect, circumscribed by the extent to which the soil around it would be moved by cultivation. Reason and analysis both sustain this view of the subject. Exhalations alone, (if they had the power) could be the bearers of lime from the rocks beneath to the soil above; their agency in promoting vegetation, like many other "lowly things of earth," I apprehend have not been properly appreciated. This however, is foreign to the subject.

2. "By successive cropping, the lime, I understand, is extracted from the surface soil?"

Carbonate of Lime, (common lime) is nearly an insoluble salt, it requires about 700 grains of pure water to dissolve 1 grain of lime, but it dissolves readily in water charged with *carbonic acid*, which it receives from every shower of rain, fall of snow, and the dews in small quantity, and a portion of it is thus rendered soluble which enters into vegetation, passes off in the excess of water, sinks into the earth, &c. The process of exhaustion however is a slow one; 6 barrels of corn per acre without manure, was obtained this season, off of a field under my observation, which had been limed 60 bushels to the acre 19 years ago and not improved beyond the influence of the lime since. Without the lime it would have been unproductive. All doubt about the permanency of the improvement will be banished from the country a few years hence.

3 "Would the application of it, in a powdered state, to the *surface* of such lands (limestone) be beneficial?"

By burning or calcination it loses its carbonic acid, which it receives again slowly from the atmosphere, rain, snow, &c.—being applied to land soon after burning in its caustic state, it acts powerfully upon the vegetable and other matters in the soil, being however, in the gradual receipt of its proportion of carbonic acid again, it becomes restored to its original elements, and subsequently exerts a milder action in the soil; such as it would have exerted had it been applied in the "powdered state." To be equally effectual however in the "powdered state," it would have to be equally as fine, as when burned, unless a larger quantity was applied. Great care ought to be taken to spread it over the land in the finest possible state of division, as upon that condition mainly depends its usefulness as an improver of soils.

4. In what quantity.

Forty bushels to the acre, repeat in 3 or 4 years and be governed by circumstances afterwards. Experience will soon come to your aid. D. W. N.

Sinclair & Co's. Wheel Plow.

We published a few weeks ago, testimonials favorable to the Wheel Plow, introduced lately into general use by our enterprising friends, Messrs. *R. Sinclair, jr. & Co.* The following are additional proofs of its value, from well known planters of Prince George's co. Md. addressed to the agent of the manufacturers in that county:

January 14, 1845.

"The Wheel Plow I got from you some time since is a most delightful running Plow—does the work in any sort of land in first rate style, and with so much ease to the horses and plowman that I am quite charmed with it. My plowman says that he never had hold of such an one. I have ordered my servant to call for the two wheel plows which you informed me you had ready for me.

To John Scott. Yours, &c. M. Waring.

—

Dear Sir: In reply to your note upon the subject of Sinclair & Co's. Patent Wheel Plow, I have to say that I have never witnessed the working of any plow, which I considered equal to it.

Its value grows out of the length and peculiar set of the mould board, in conjunction with the counter friction wheel, both of which are so arranged as to lessen friction, and thereby render the plow easier in its draught—The wheel I consider a great improvement, as thereby the whole of the bottom friction is obviated. This alone makes it superior to all other plows.

I am now turning a heavy sward of 14 inch slice, lapping each as perfect as possible, with two horses. To do the same with ease with any plow of a different construction, would require in my judgment three horses.

I am, &c. Hanson Penn.

Bladensburg, Jan. 22, 1845.

Mr. *Jno. Scott.*

Black Sea Wheat.

The January number of the *British American Cultivator* contains a very able article upon the necessity of making periodicat changes of seed, in order to prevent, or rather to avoid, the evils of degeneracy. A part of this article is comprised of a correspondence between Mr. *Ruttan*, a distinguished Canadian Farmer, and the Hon. *Chas. E. Clarke*, president of the Agricultural Society of Jefferson County, New York; from which we extract that part which relates to a variety of Spring Wheat known in New York, as in New England, as the Black Sea Wheat.

H. Ruttan, Esq.,—*Dear Sir*,—In answer to your favor of the 10th October, 1844, I have to state, that nine years since I introduced the Black Sea Wheat into the county of Jefferson. It was imported the year before from Odessa. I obtained mine from the first crop of the importer.

It is a white chaff-bald wheat, with a strong stout straw.

I sowed twelve quarts (all I had) upon a piece of very well-prepared ground, on the 25th of May, and I obtained twelve bushels.

I sowed again, the 23rd of May the next year, and from an acre of the best, I obtained forty bushels. The next year, I sowed four acres in April; the ground was in the very best order, and I obtained two hundred bushels from the four acres. It was as stout a field of wheat as I ever saw. All these crops were raised in good ground, and under very high cultivation, and the seasons were favourable.

I have never failed to raise a good crop; it has never shrunk or been smutty under my cultivation, and my whole crops have averaged over twenty bushels to the acre. I consider it the best spring wheat that I have seen, as to quality, certainty, and quantity.

I never sow it except after a well hoed crop, though many summer fallow and sow the wheat in the spring. It is much less liable to rust than any other variety of wheat that I am acquainted with, which I attribute to its being about ten days earlier, and also to the strong firm straw.

Unsound Apples.—Four children in a single family in Ohio, died with malignant scarlet fever, brought on mainly by their eating freely of rotten or unsound apples, which were buried and dug up for winter consumption. Three of the children were attacked by vomiting soon after eating the apples.

Horse Breaking.—There is a difference of opinion among horse dealers in regard to the time when you should commence showing your authority over the motions of the young horse. Some contend that they can be better broken after being allowed to run perfectly free for three or four years; while others insist that there is danger of their becoming self-willed if they are not compelled to submit at an earlier age. One point is certain: it is best to let the colt run perfectly free until the time comes when you have the leisure to control him completely and effectually. Half breaking is worse than no breaking; orders once given must be obeyed or orders would be better withheld.

The first step to be taken, in breaking a young horse, is to convince him most satisfactorily that his halter is stronger than himself. If he breaks his first rope he will never forget it; you may fasten him afterwards a hundred times with a timber chain and he will make a hundred attempts to break it—because his memory is better than his judgement. He must not be suffered to break loose, at the first tying, on any consideration whatever. We often see very gentle horses that will stand quietly in harness for hours, if you attempt not to fasten them; yet they will give your halter a try as soon as they find you have attempted to make them fast. This will never be the case if you have done your duty in halter breaking.

How to make a horse go.—The next step is to teach a horse to move at your bidding. For unless you can do this it is of little consequence whether you can fasten him or not. A well broken horse will move when you desire he should, either forward or backward.

You must be extremely cautious how you issue your first orders to "move." You must not expect to be able to drag your horse after you until he has become used to following—you cannot even "lead him to drink" unless he wills to follow, and his will should be won by kindness unless you prefer to rule always by brute force.

After your colt is fairly halter broken—after he has been made fully sensible that your power, at the post, is superior to his, you will do well to coax him to move, either by inviting him to eat something agreeable, or to follow some agreeable company. You may tie his halter fast about his mother's neck, and he will walk by her side; or you may tie him to the shaft of the wagon to which she is harnessed, and let him travel with her.

In some districts we find colts of four months old travelling with much regularity and order by the side of the mother that carries the family to meeting in the chaise. The colt's halter is made fast to the fore end of the shaft, and he is kept out of mischief, more effectually than some children are, during the whole of the service. Colts that have been taught to go to meeting are half broken; whereas if they were allowed to run perfectly free, going to meeting would be of no service.

Now your colt is taught to stand and to move at your request; after much repetition he will acquire such a habit of obedience that it will be natural and easy to him. Before he is old enough to draw a load you can place a harness on him and let him become used to that. He should never be allowed to draw hard when young. Nor should any burthen, heavier than a saddle, be placed on his back before he is three years old. Some owners will not allow a grown man to ride before the colt is four.

Best age for Breaking.—We cannot see but one objection to halter breaking while the colt is quite young, and that is the temptation to back him before his spine has become strong enough to bear a great weight. The owner must guard against such an abuse, and he will then have a horse more kind, more gentle, more safe, and more certain in draft, than if his colt were allowed to run wild till three or four years of age. In addition to this, the labor of breaking will be found less if you commence with the first summer; and young colts bear restraint with less repining and loss of flesh than full grown colts.

When you first put a young horse to drag a load, be quite sure it is a light one. Never let him conjecture that his load can keep him back. Teach him to proceed till you command him to stop, and mind that he stops on ground where he can readily start again. Speak plainly and distinctly to him. Say "whoa" when you mean whoa, and say "go" or "come," or something that sounds quite differently from whoa, when your meaning is different.

We have had high spirited horses that would stop at once, by the word of mouth only, when the harness failed and the reins were broken—when the sleigh upset, and when the chaise broke down. With such horses you feel more safe than when you depend wholly on the rein, or your blind bridle. You have a double chance of safety in case of accident.

Backing Out.—Horses as well broken as oxen should be taught the art of backing. How much we are troubled to back some carriages out of a shed? A young horse should be taught to walk backward, while in a cart or chaise, where the ground descends and where he can easily follow. It is almost as easy to teach him to go back as to go forward. Speak to him—say "back" plainly, and use such plain language as an Irishman can understand.—*Boston Ploughman.*

Farmer Boys and Winter Evenings.—We copy the following good and timely suggestions from the Farmers' Cabinet:

"All know that it is by little and little that the bird builds her nest, and the bee her cell. Industry and perseverance will accomplish in time, far more than the unreflecting are apt to suspect. Farmers' boys, for instance, who would spend a couple of hours these long winter evenings in some useful study, or in the reading of useful books, would accomplish in three or four months, what would surprise one who is accustomed to loitering away these quiet portions of the day without employment. Sixty hours in the month, saved from evenings, which might otherwise have been spent, would amount, in the course of a long winter, to as much time, and would enable a lad to accomplish as much as would several weeks' schooling. And the boy who will thus perseveringly attend to his own improvement, may rely upon it that his increased intelligence will not only add to his respectability, but he will be all the better fitted for the active and responsible duties of life, towards which he is often impatiently looking."

In selecting books for reading, we say to farmers' boys reject such as are founded on fiction, and choose those only which deal with instructive *facts*—as on natural history, voyages, travels, and biographies, ancient and modern history—that of your own country in preference to all others. You will worse than waste your time by devoting it to fictitious reading—which, though sometimes unobjectionable in its tendency, is quite often of a contrary character, and seldom indeed really useful. As some writer has observed, you should be as particular in the choice of your books as in the choice of your friends. If you early contract a habit of devoting your leisure hours to useful reading, you will find the taste for it to "grow with your growth and strengthen with your strength"—and your minds will become improved by the exercise of the mental powers, as your bodies are by action.

If the young could but justly appreciate the inestimable value of knowledge—the power it has over ignorance—the influence it has in securing virtue, respectability, and even worldly thrift—they would never spend in frivolous amusement, or waste in idleness, a single hour of winter evenings, which they might devote to profitable study or reading.

Where there is no opportunity for farmers' sons to get books from libraries, their parents should by all means purchase them for them, if possibly within their power. Even one or two good books each winter, would be of great advantage to them—and, indeed, this number would be better than too many—as they would be likely to derive more profit from becoming *well* acquainted with the contents of a few, than from a superficial persual of many. Once interested in reading or study, progress is certain, and profit untimely sure.

"Knowledge is power": it is pleasure—it is wealth. He who to a *pure heart* unites an *enlightened mind*, possesses a treasure, compared with which the costliest diamond is meaner than the common dust. Farmers' sons, we are addressing you in particular: improve whatever opportunities yon have to inform your minds: be assured that when you shall have become young men, your influence and standing in society will depend a vast deal upon the extent of your knowledge. A man is, in one important respect, *superior* to another, inasmuch as he is *more intelligent* than another—and ignorance must always pay tribute to knowledge. Store it, then, in your youth—for, remember the truthful aphorism of Goldsmith—"The boy is father to the man." ***

Wet Lands--Drainage.—We have before alluded to this important subject, but without pursuing it to the extent it deserves. Lands which are naturally wet, can never become a source of real profit to the owner until they have been thoroughly drained. So long as they remain in a state of super-saturation, after every considerable shower, it is impossible to realize any decidedly good and profitable crop from them. In many parts of this country, and indeed on almost every farm of considerable extent, more or less of this description of land is to be found—generally in a state of nature, but sometimes enclosed and presenting some feeble attempts on the part of the owner to reclaim and render it in some degree susceptible of cultivation and the production of useful crops, under the scythe or hoe. And it is very often the case that after lands of this peculiar character have been laboriously "cleared" and fenced, they fail, from a want of information and practical knowledge on the part of the cultivator, to produce a remunerating crop,—often yielding "less than was sown," and in most cases, perhaps, leaving the operator to congratulate himself on having simply his "labor for his pains." It has, however, been long conceded by those capable of judiciously estimating their value, that *low lands* are the most valuable for purposes of general culture; that they are *stronger*, and though they are certainly more liable to be injuriously affected by sudden alternations of atmospheric temperature, more valuable, on the whole, than any other lands on which the farmer can bestow his time and seed.—*Maine Cultivator.*

From the Southern Planter.

TOBACCO.

Report from the Hole and Corner Club of Mecklenburg.

The Committee appointed, at the last meeting of the Club, to examine the plantation of Mr. Richard Boyd, have performed that duty, and beg leave to make the following report. The attention of the Committee was first called to the crops now standing on the land. The crop of corn would be reckoned a good one, had the season been favorable, but in the present very unfavorable season, it merits high commendation. The land was obviously well prepared, and the crop well cultivated. Your Committee, however, recommend to Mr. Boyd the cutting the *tops* from his corn in future, as they constitute a valuable addition to the winter supply of provender. The crop of tobacco has been well cultivated, kept clear of worms and succors, and considering the dry season, is of fair average size and ripening kindly. Mr. Boyd pointed out to your Committee the result of an experiment on his tobacco crop, of a top dressing of the plant in the hill, made with equal parts of plaster and drawn ashes. The plants thus treated, were larger, and presented a more healthy appearance than any in their immediate vicinity. The Committee deem it incumbent on them, in connection with the subject of tobacco, to object to the *high priming*, practiced by Mr. Boyd, and while objecting, they would recommend to him, hereafter, to adhere to the old planters' rule, of priming at all times and in all seasons, to the first big leaf on the plant, and not higher. And by the way, your Committee think that the experience of those who have gone before us, is entitled to more respect than in the general desire for improvement, in our day, it receives.

Your Committee are aware that the proper method of curing tobacco is *debateble* ground. They know, also, that it is impracticable, from the nature of things, to give minute directions which would be applicable in all cases, as so much depends upon circumstances, such as the season, the size of the plant, its state of ripeness when cut, with a long list of *etcetras*, not necessary to enumerate to practical planters. But without designing to be dogmatical, the Committee cannot on the present occasion withhold a decided expression of their dissapproval of Mr. Boyd's extravagant use of fire, in curing his tobacco. They also object to the extreme closeness of his barns. They consider the *use* of fire, in curing tobacco, to be an evil, although they admit it is a necessary one, in our latitude where full crops are made. Acting upon this opinion, they would recommend as sparing a use of fire as is compatible with the preservation of the plant from decay—and in open barns, through which the air can circulate freely, very little fire is necessary for that purpose. These remarks are submitted to the Club with diffidence, and only for what they are worth.

Mr. Boyd's fields appear to have been judiciously ditched, and the soil, though light and friable and particularly liable to loss from heavy rains, is effectually preserved. He was one of the first planters, in our neighborhood, to adopt the system of improving his land, by

sowing the artificial grasses, and he has been well compensated therefor, by the increase of his crops and the improved appearance of his plantation.

The plough teams were not shown to the Committee; the oxen, which they saw engaged in hauling wood to the barns, were in good condition, and appeared to be well cared for. In a full and free conversation with Mr. Boyd in relation to the management, plans, &c., your Committee feel constrained to say, that they seem to be founded on sound, common sense, practical views, and altogether free from visionary theories. Mr. Boyd's fencing is good, and kept in good repair. The necessary buildings for the security of his crops and the accommodation of his negroes, are good and substantial of their kind.

Respectfully submitted,

JOHN NELSON,
REUBEN A. PUYEAR.

A KENNEBEC PORKER.—Mr. Madison Tuck purchased, the other day, in our streets, an enormous hog, raised by Mr. Jonas Hill of Fayette. He weighed, when purchased, SIX HUNDRED AND SIXTY-ONE pounds, and having been partly frozen, when bought, would have probably weighed from *twenty* to *twenty-five* pounds more when killed. The loose fat taken from him weighed *thirty seven* pounds, which in all, would make the weight of the hog over SEVEN HUNDRED POUNDS! The breed was one quarter Berkshire, and three quarters Newbury White, and Tuscarora—which is Berkshire enough to make a good hog, in all conscience, as farmers will testify. Mr. Tuck says he was one of the best proportioned hogs he has ever seen—light-lean, extra pork, and was altogether one of the best of his size ever brought into this market. Mr. Hill has more of the same breed, and intends to make a display in our market saperior to this in the pork line another season.

As the political papers of late are making quite an ado about "whig" and "democratic" shoats, of 400 or 500 pounds weight, they will please "hold their tongues" until they can produce something that shall equal the "shoat" of our fried Hill, who, by the way, is one of our subscribers, and belongs to "our party." "This is a great country."—*Maine Cultivator*

Mode of Catching the Bee Moth.—Dr. Waterman gives in the Cleveland Herald, his mode of catching the bee-miller or moth. He says, "I took two white dishes, (I think white attracts their attention in the night,) or deep plates, and placed them on the top of the hives, and filled them about half full of sweetened vinegar. The next morning I had about fifty millers caught; the second night I caught fifty more; the third night being cold, I did not get any; the fourth night being very warm, I caught about four hundred. Most of these were most likely bee-moths, (Galleria cereana.)

BALTIMORE MARKET, Jan. 27.

Beef, Balt. mess,	9a	Butter, Glades, No. 1,	13
Do. do. No.1,	7½a8	Do. do. 2,	7a11
Do. prime,	6a	Do. do. 3,	5a7
Pork, mess	10½a11	Do. Western 2,	6a
Do. No. 1	a	Do. do. 3,	5a6
Do. prime	9½	Lard, Balt. kegs, 1,	a7
Do. cargo,	a	Do. do. 2,	none
Bacon, hams, Ba.lb	7½a8	Do Western, 1,	a6¾
Do. middlings, "	a5¾	Do. do. 2,	5a5½
Do. shoulders, "	5½a	Do. do. bls 1,	6a6¼
Do. asst'd, West.	6	Cheese, casks,	6
Do hams,	7½a8	Do. boxes,	5a8½
Do. middlings,	5¾	Do. extra,	12a15
Do. shoulders,	5½a		
COTTON—			
Virginia,	9a10	Tennessee, lb.	
Upland,	6¼	Alabama,	6¾a
Louisiana,	6¾	Florida,	10a12
North Carolina,	10a11	Mississippi	
LUMBER—			
Georgia Flooring	12a15	Joists & Sc'ling, W.P.	7a10
S. Carolina do	10a12	Joists & Sc'ling, Y.P.	7a10
White Pine, pann'l	25a27	Shingles, W. P.	2a9
Common,	20a22	Shingles, ced'r,	3.00a9.00
Select Cullings,	14a16	Laths, sawed,	1.25a 1.75
Common do	8a10	Laths, split,	50a 1.00
MOLASSES—			
Havana, 1st qu. gl	30a31	New Orleans	24a
Porto Rico,	29¾a	Guadaloupe & Mart	26a28
English Island,		Sugar House,	28a36
SOAPS—			
Baltimore white,	12a14	North'rn, br'n & yel.	3¼a4½
brown & yell'w	4½a5½		
TOBACCO—			
Common	2 a 3½	Yellow,	8 a10
Brown and red,	4 a 5	Fine yellow,	12a14
Ground leaf,	6 a 7	Virginia,	4 a 9
Fine red	6½a 8	Rappahannock,	
wrappery, suitable		Kentucky,	3 a
for segars,	8a13	St. Domingo,	13 a11
Yellow and red,	7a10	Cuba,	15 a38
PLASTER PARIS—			
Cargo, pr ton cash	3.50a	Ground per bbl.	1.12a
SUGARS—			
Hav. wh. 100lbs	9a10.50	St. Croix, 100lbs	7.00a8.00
Do. brown	a7.50	Brazil, white,	a
Porto Rico,	5.50a6.40	Do. brown,	
New Orleans,	4.37a 5	Lump, lb. c.	
FLOUR—We quote			
Superfine How. st., from stores, bl			$4.18.
Do. City Mills,			4.18.
Do. Susquehanna,			
Rye, first			3.18a
Corn Meal, kiln dried, per bbl.			2.25
Do. per hhd.			11.75
GRAIN—			
Wheat, white, p bu	90a100	Peas, black eye,	50a55
" best Va red	88a	Clover seed, store	$4.18a
" ord. to pri. Md	75a90	Timothy do	2.a2.25
Corn, white,	41a42	Flaxseed, rough st.	1.35
" yellow Md.	43a44	Chop'd Rye, 100 lbs.	1.25
Rye, Md.	67a	Ship Stuff, bus.	20a
Oats, Md.	27a28	Brown Stuff,	15a
Beans,	110	Shorts, bushel,	10a
FEATHERS—perlb.			31a
COFFEE—			
Havana,	7 a 8	Java, lb.	10 a12
P. Rico & Laguay.	5½a6¾	Rio,	6¼a7¼
St. Domingo,	5¾a 6	Triage,	3½a 4¼
CANDLES—			
Mould, common,	a10	Sperm,	30a31
Do. choice brands,	10½	Wax,	60a65
Dipped,	a 9		

Tobacco, as usual at this season is very dull; some of the shippers, however, are willing to purchase comm'n qualities, but the prices offered are so low that holders mostly decline to sell at present. We notice sales of 22 hhds Kentucky, Mason co. at 4.50a11 and 25 hhds Missouri at $4 50. We quote Md. as before viz. infer. and common $2a3 midd. to good 3.50a5; good 6 a7 50, and fine 8a14. Sales of ground leaf at $3a7, for infe. to good parcels. There is very little doing in Ohio and former prices are continued: comm. to middling 3a 4,50; good 5a 6; fine red and wrappery $6. 50a10; fine yel low 7 50a10, and ex. wrappery 11a13—Inspections 50 hhds Md., 32 do Ohio, 12 do Kentucky and 2 hhds Virginia—total 96.

Wool is rather more active this week and sales of washed native have been effected to some extent at 30c. per lb. which rate the article now commands readily—Some holders however refuse to sell for less than 32c.

Live Hogs are scarce and sell readily at 4.50 per 100 lbs.

Cattle—There were about 500 head of beef Cattle offered at the scales this morning, of which 85 head were driven to another market, and 265 sold to the city butchers. The prices ranged from $1.62 to $3 per 100 lbs. on the hoof, equal to 3.25a5.75 net as in quality; there are now 50 head in market unsold.

Flour—The limited stock of Howard st. has induced holders to advance the store price to $4.25—but buyers are unwilling to pay the advanced rate, and no sales have taken place. The receipt price by cars is $4. Sales of City Mills on Saturday at $4.25, and on Monday at $4.18.

FOREIGN—The news by the last steamer, the Cambria, confirms the advance in price of Cotton at Liverpool—the advance is 1-8a¼d. which has caused an advance of 1 cent in the N.Y.market. Exertions are being strenuously made to have the duty on our cotton repealed, in order to enable the manufacturers more successfully to compete with those of the U. S.

The market for American provisions continues good, and it is supposed will become one of great importance. In Beef the improvement has been marked, and the best brands of the American article are now preferred to Irish. In Pork the same improvement is not evinced, in consequence of the want of care in packing. In Lard the rise in price for fine qualities has run up 10s since Sept. owing chiefly to the advance on Irish butter and lard.

There was a fair demand for Tobacco, the sales in London for the last month, consisting of 1197 hds. of which 164 were Virginia leaf, 227 Stemmed, 301 Kentucky leaf, 415 Stemmed and 1 Maryland. The import of the year has been 12,541 hhds. of which 968 were Virginia Leaf, 2346 Stemmed; 160 Kentucky leaf, 4955 Stemmed, 9 Maryland, 4 Canadian Leaf, and 2143 hhds unsampled, of which 1513 are from Virginia, 573 from N.Orleans and 57 from N. York.

R. SINCLAIR, jr. & Co's. CATALOGUE

FOR 1845.—(*Continued.*)

☞Orders for any article in the annexed catalogue will meet with prompt attention, addressed to S. SANDS, publisher of the American Farmer, or to R. Sinclair, jr. & Co. Light st. wharf.

BIENNIAL AND PERENNIAL FLOWER SEEDS.

Auricula,
Anemone or wind flower,
Alyssum, golden,
Cobea, climbing,
Clary purple striped
Cowslip, [white.
Canterbury Bells, blue and
Cassia, Maryland,
Columbine, Double,
Cardinal flower, scarlet,
Campion Rose,
" white,
Dahlia, double, fine mixed,
Fox Glove, purple
white
Gilia, blue
Gilliflower, Twickenham,
scarlet Brompton
purple Prussian,
white wall leaved,
seven sorts, mixed,
Hollyhock, several fine
double sorts mixed, including black,
Honeysuckle, French
Hybiscus, great flowering
Honesty, or Satin flower
Indian Shot,
Jacob's Ladder,
Lynchnis, scarlet
Migonette,
Monk's Hood,
Monkey Flower,
Oleander,
Peas, Everlasting,
Pink, Carnation,
Pheasant's Eye,
Chinese Imperial,
Fringed,
Pæony, of sorts,
Periwinkle, Red Madagascar
Do white do
Phlox,
Rocket, sweet
Sweet William,
Snap Dragon, scarlet
crimson
white
Scotch Broom,
Scabius, sweet, beautiful
Sophora, blue
Star, blue blazing
Snowberry,
Trumpet Flower,
Thistle, Great Globe,
Do Caledonia, silver leaved,
Virgin's Bower,
Wall Flower, bloody.

One hundred fine varieties, of annual, biennial, and perennial flower seeds, for $4.50, or fifty papers well assorted for $2.50.

BULBOUS FLOWER ROOTS.

Hyacinths, Double, $1.50 to $3 per dozen.
Red and Rosy coloured.
White.
Dark and Pale Blue.
Yellow.
Single, Red.
White.
Dark and Pale Blue.
Yellow.
Tulips, Parrot, $1 to $2.50 per dozen.
Early.
Double.
Bizarres,
Tulips, Bybloems.
Cherry or Rose.
Crocus, 50 cts. per dozen.
*Amaryllis, 25 cents to $5 each.
Polyanthus Narcissus, 12½ to 37½ cents each.
Crown Imperials, 25 to 50 cents each.
*Lilies, several superb sorts, 25 to 50 cents each.
*Arum Dracunculus, or Dragon Plant, 50 cents each.
Snow Drops, 6¼ cents each.
Jonquilles, 12½ cents each.
Double Anemone, 12½ cents each.
*Ferraria, Tigrida, or Mexican Tiger Flower, 25 cts each.
*Tuberose, 25 cents each.
*Jacobian Lilly, superb, 25 cents each.
*Double Dahlias, very superb, from three to nine feet high, from 25 to 50 cents each.

*Those marked thus * are tender sorts, or such as are planted in the spring. Directions for cultivating bulbs furnished with each package of roots.

FARMING SEEDS.

	PRICE.
White Dutch Clover, sow 4 quarts per acre, per lb.	$0 25 *a* 0 37
Red or Southern Clover, sow 8 quarts per acre, per bushel,	—
Yellow or Northern Clover,	—
Common Trefoil, sow 8 quarts per acre, per lb.	37
Yellow Trefoil,	37
Lucerne or French Clover, sow 18 lb. per acre, per lb.	30 *a* 37
Burnet, Field, sow 3 bushels per acre, per bushel,	6 00
Vetches, spring and winter, sow 1 bushel per acre, per bushel,	5 00
Sainfoin, or Espersett, sow 4 bushels per acre, price per bushel,	4 00
Timothy, sow 8 qts. per acre, per bushel,	—
Orchard grass, sow 2 bushels per acre, per bushel,	—
English Turf or Lawn grass, sow 3 bushels per acre, per bushel,	
Herds, or red-top grass, sow half bushel per acre, per bushel,	—
Kentucky Blue or Green Sward Grass for lawns, pastures, &c., sow 2 *a* 3 bushels per acre, per bushel,	—
Tall Meadow Oat Grass, sow 2½ bushels per acre, per bushel	—
Millet, sow 8 quarts to half bushel per acre, per bushel,	—
Tobacco Seed, several sorts,	—
Spring wheat and Rye, selected,	—
Fall wheat and Rye, selected,	—
Broom Corn,	—
Buckwheat, sow quarter to half bushel per acre,	—
Naked Barley,	—
Flax Seed,	—
English Ray or Rye Grass, sow 1 bushel per acre, per bushel,	3 00 *a* 4 00
Mustard Seed,	—
Yellow Locust Seed,	—
Honey Locust Seed,	—
English Split Peas, for boiling,	—
English Potato Oats, sow 3 pecks per acre, weight 43 lbs. per bushel,	2 50 *a* 3 00
Black Irish, per bushel,	2 50
American Potato Oats, per bushel,	75
Glade Oats, per bushel,	—
Large Ox Cabbage, for cattle,	2 50
Cow Cabbage, or Cæsarian Kale,	2 50
English Rape or Cole Seed,	—
Large White Norfolk Turnip,	1 00
Yellow Bullock Turnip,	1 00
White Field Beans,	—
White Mulberry Seed, (Morus Alba.)	—
Field Peas, white and green, sow 1 bushel per acre,	2 50
Cow Peas, for improving land,	75c. to $1 00
Mangel Wurtzel, sow 3 lbs per acre, per lb.	75
Sugar Beet, sow 3 lbs per acre,	75
Ruta Baga, or Swedish Turnip, sow 6 oz. to 1 lb. per acre, per lb.	75
Large Yellow and White Corn, selected, per bushel,	1 50
Yellow Coreys and White Flint Corn, for early crop, and transplanting, per bushel,	2 00
Baden Corn, per bushel,	1 50
Mercer or Twin Corn, per bushel,	1 50

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